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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/475,190

12/30/1999

KRISTIAN MATS LINDSKOG

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05/21/2004

ERICSSON INC.
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PLANO, TX 75024

EXAMINER

BURD, KEVIN MICHAEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/475,190

Applicant(s)

LINDSKOG ET AL.

Examiner

Kevin M Burd

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 22-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 22-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. This office action, in response to the amendment filed 3/10/2004, is a final office action.

Response to Arguments

2. The previous objection to the specifications is withdrawn.

Applicant's arguments filed 3/10/2004 have been fully considered but they are not persuasive. Applicant states no step of including sending node's estimation of a time interval is anticipated or taught by Skelly. However, Skelly discloses this limitation in column 13, lines 52-56. Skelly states, "Given only a one-way measurement, we can not distinguish the offset from the measurement, unless we are given the network delay". A time stamp is to a packet when it leaves the sender (column 13, lines 44-45). The network delay is the estimation of the time interval to transmit the packet. Therefore, Skelly does teach the transmitting of the node's estimation of a time interval. In addition, the network delay is then measured (column 13, lines 55-56). From this information the clock skew is estimated and removed (title and column 14, lines 12-16).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6-10, 12-19, 37-41, 43, 44, 46-52 are rejected under 35

U.S.C. 102(e) as being anticipated by Skelly et al (US 6,661,810).

Regarding claims 1, 2, 18, 19, 37 and 43, Skelly discloses a system and method of transmitting and receiving information packets in a network. All of the nodes of the network are capable of transmitting and receiving packets and each of the packets have a time stamp when the data is received and when the data is transmitted (column 13, lines 41-60). A receiver receives a signal with a time stamp of when the signal was transmitted (column 13, lines 41-49). The time interval from transmission to reception is calculated from the received information (column 13, lines 46-52). The frequency deviation, or skew (column 1, line 59 to column 2, line 3), is calculated and removed from the receiver (column 14, lines 9-58).

Regarding claims 3 and 51, a time stamp is made when the packet is transmitted from the sender and when the packet is received in the receiver (column 13, lines 41-49). This is the time interval.

Regarding claims 4, 6, 7 and 50, Skelly discloses the capability of using absolute time stamps and the accuracy of the time stamp but ops to use relative time stamps for convenience (column 14, line 61 to column 15, line 4).

Regarding claims 8 and 9, over time each sender will transmit a plurality of time stamps and each receiver will receive a plurality of time stamps. The calculation of the network delay is described in column 15.

Regarding claims 10, 12, 38-41, 44, 46, 47 and 52, some uncertainty is present in the system until the skew is compensated for.

Regarding claims 13-15, more than one sender and one receiver will be present in the system. These additional elements are also in communication with the element of the system.

Regarding claims 16, 17, 48 and 49, any packet transmission system is capable of utilizing this system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 11, 20, 22-36, 42 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skelly et al (US 6,661,810) in view of Greer et al (US 5,697,082).

Regarding claims 5, 11, 42 and 45, Skelly discloses the method stated above in paragraph 3. Skelly does not disclose using a Kalaman observer for calculating frequency deviation or skew. Greer discloses the use of a Kalaman filter to calibrate an oscillator. The Kalaman filter allows the proper correction of the oscillator to be conducted to correct for errors due to aging of the terminal oscillator (column 2, lines 46-63). Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention to use the Kalaman filter of Greer in the system and method of

Skelly to allow the skew to be compensated for properly so the oscillators are synchronized. This allows data to be transferred correctly.

Regarding claims 20, 22 and 23, Skelly discloses a system and method of transmitting and receiving information packets in a network. All of the nodes of the network are capable of transmitting and receiving packets and each of the packets have a time stamp when the data is received and when the data is transmitted (column 13, lines 41-60). A receiver receives a signal with a time stamp of when the signal was transmitted (column 13, lines 41-49). The time interval from transmission to reception is calculated from the received information (column 13, lines 46-52). The frequency deviation, or skew (column 1, line 59 to column 2, line 3), is calculated and removed from the receiver (column 14, lines 9-58).

Skelly does not disclose using a Kalaman observer for calculating frequency deviation or skew. Greer discloses the use of a Kalaman filter to calibrate an oscillator. The Kalaman filter allows the proper correction of the oscillator to be conducted to correct for errors due to aging of the terminal oscillator (column 2, lines 46-63). Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention to use the Kalaman filter of Greer in the system and method of Skelly to allow the skew to be compensated for properly so the oscillators are synchronized. This allows data to be transferred correctly.

Regarding claims 24, 27, 28, 33 and 34, any packet transmission system is capable of utilizing this system.

Regarding claims 25, 26 and 31, more than one sender and one receiver will be present in the system. These additional elements are also in communication with the element of the system.

Regarding claims 29, 30, 32, 35 and 36, Skelly discloses the capability of using absolute time stamps and the accuracy of the time stamp but ops to use relative time stamps for convenience (column 14, line 61 to column 15, line 4).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact information

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications; please mark "EXPEDITED PROCEDURE" or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Kevin M. Burd
PATENT EXAMINER
5/20/04